

## Single pack joinery coating systems

### Service life guide

Independent research shows good quality, factory finished, exterior joinery has a typical service life of around 60 years; and more if best practice building construction and design principles are followed.

Like most durable products, joinery service life is closely related to appropriate maintenance. This note gives guidance on typical durability and maintenance cycles for Teknos' single pack joinery coating systems.

#### Factors affecting service life and maintenance frequency

The timber species used in construction affects not only the ultimate service life of the joinery but also the paint system maintenance frequency.

Modern paint systems are flexible and resistant to direct weathering, but will begin to degrade when sunlight (UV) starts to degrade the lignin in the timber surface. How quickly this happens is a function of the timber species.

Coating pigmentation inhibits UV degradation in much the same way that sun creams protect exposed skin. If the pigmentation is low, as in light translucent shades, the protection factor is less than more heavily pigmented coatings such as whites and opaque colours. This is reflected in the maintenance frequency.

Very dark colours, such as black, have high heat absorption in direct sunlight and at high temperatures, resin bleed and surface checking can cause problems with some timber species, requiring more frequent maintenance.

Exposure conditions vary significantly with location. Timber naturally expands and contracts with temperature and moisture and more extreme and variable climates experience earlier surface degradation and so south facing elevations, coastal sites, and exposed locations require more frequent maintenance.

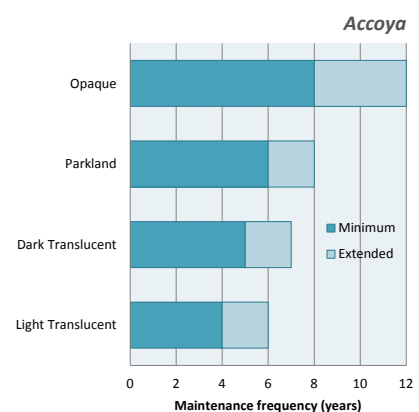
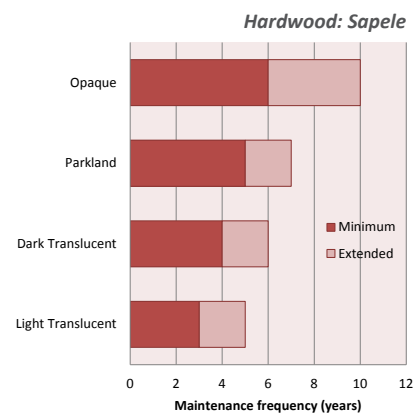
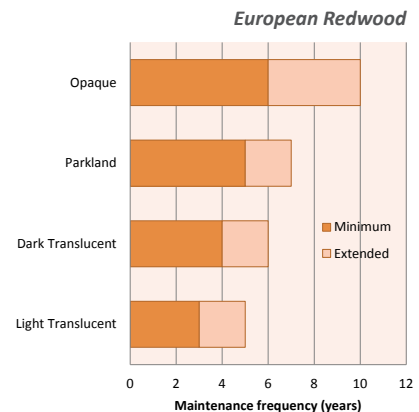
Good joinery design is critical to long term performance. Features such as rounded edges, sloping cills, fully protecting glazing beads, protecting end grain and construction joints will help efficient and fast water drain off and significantly extend maintenance periods.

Coated surfaces and adjacent rainwater goods should be maintained and washed down annually, to remove pollution and repair damaged areas.

Some "chalking" of the paint film will occur over time due to surface erosion of the microporous paint film. This is quite normal and does not detract from the system performance.

Most hardwoods exude tannins, while softwood knots may bleed tannin or exude resins. Both can stain the topcoat, and liquid resin may seep through the coating leaving a sticky residue on the surface. These problems, normally seen after installation, can be aesthetically unappealing but rarely detract from coating performance. Restoring the appearance and integrity of the coating, is straightforward and explained in Teknos' maintenance guidelines.

Oak joinery is often specified with a clear finish in an attempt to preserve its factory appearance. Unfortunately, Oak is particularly susceptible to surface splitting and degradation. Oak rapidly discolours in sunlight and darkens if moisture penetrates unprotected joints or end grain. Oak's natural durability means these issues rarely cause a performance problem, but they can be unattractive. Teknos can supply a system which complements the features of Oak, however, regular maintenance is required to maintain the aesthetics.



The graphs above show typical maintenance intervals for a range of coating systems applied to three typical cladding substrates. Extended maintenance frequencies can be achieved in optimum conditions.

*Note:*

*This information relates to coatings applied in the factory; to well designed joinery; applied at the correct film thickness; and using recommended application methods.*